
XXVIII. *A Description of several new Species of Insects collected in New Holland by Robert Brown, Esq. F.R.S. Lib. Linn. Soc. By the Rev. William Kirby, M.A. F.R. and L.S.*

Read February 17, 1818.

No country has produced more novelties in every department of Natural History than New Holland; and the plants and animals of that insular continent, if I may so speak, are most of them of a peculiar character. Even such as are most nearly related to those of other climates usually exhibit some diagnostic that separates them from their correlatives, and indicates the region that gave them birth. Thus, the *Rhipiceræ* of New Holland are distinguished from those of South America by the teeth that arm the inside of their mandibles: their *Lucani*, (*L. nebulosus* Kirby, at least,) from those of other countries by their recurved mandibles and emarginate mentum. Not to mention the differences that separate *Anoplognathus* from *Geniates* and *Rutela*, or *Scarabæus proboscideus* from its affinities *Sc. mobilicornis*, *quadridens*, &c.

Mr. Brown, (who has so ably illustrated the Flora of New Holland, and whose observations and discoveries have diffused so much new light over the science of Botany,) when in that country did not overlook its zoological productions, and amongst other subjects collected many new and singular species of insects. Desirous of having these treasures described, and his time and attention,—to the great benefit of the botanical world,—being de-

voted

voted to another science; though fully competent to the task himself, he has requested me to lay a description of them before the Linnean Society, which I shall now do to the best of my ability, adhering to the plan begun in my former paper.

COLEOPTERA PENTAMERA.

(*Buprestidæ.*)

BUPRESTIS Linn.

cruentata. 1. *B. viridis*, elytris subacuminatis violaceis: fasciis duabus, maculaque antica laterali, sanguineis.

PLATE XXIII. FIG. 1.

Long. corp. lin. 4.

Parva sed pulcherrima. *Corpus* lineare, subcylindricum, nitidum, punctulatissimum, glabrum, amœne viride. *Caput* triangulare, inter oculos impressum, postice canaliculatum. *Antennæ* capite vix longiores, nigræ. *Thorax* linea angustissima dorsali longitudinali lævi. *Scutellum* triangulare: disco excavato. *Elytra* striata: striis punctatis, violacea; fasciis duabus, anteriori subsinuata, postica lunata, maculaque sub humero cum fascia antica connexa, sanguineis. Inter fascias color violaceus elytrorum vergit in purpureum. Elytrorum apex subacuminatus.

tricolor. 2. *B. viridi-aurata*, elytris bidentatis, flavis: litura basis, sutura, fascia, maculaque apicis, violaceis.

Long. corp. lin. $5\frac{3}{4}$.

Corpus subdepressum, oblongum, punctulatum, subtus viridi-auratum: pube parva albida. *Caput* inter oculos impressum, postice canaliculatum. *Antennæ* nigræ. *Thorax* æneus: lateribus sordide flavis, postice paulo latior: puncto medio impresso. *Scutellum* triangulari-cordatum, viride: disco impresso.

Elytra

Elytra striata: striis punctatis; interstitiis punctis sparsis, sordide flava: litura laterali postice hamata basis, sutura late, fascia angulata pone medium, maculaque apicis subtriangulari, cum macula elytri alterius lunulam formante, purpurascente-violaceis, vel cruce obversa lunula coronata.

phæorhæa. 3. *B. viridi-aurata*, elytris bidentatis subsulcatis luteis, apice fusco-purpurascentibus.

PLATE XXIII. FIG. 2.

Long. corp. lin. $4\frac{2}{3}$.

Insectum elegans. *Corpus* lineari-oblongum, subdepressum, punctulatum, glabrum, nitidum, viridi-auratum. *Caput* canaliculatum. *Antennæ* viridi-æneæ. *Thorax* antice submarginatus, postice latior subtrilobus, utrinque puncto majori foveolaque dorsali impressus. *Scutellum* triangulare, viridi-auratum, disco impressum. *Elytra* subsulcata: sulcis punctatis; interstitiis sparse punctatis, obscuriuscula, pallide lutea, apice late fusco-purpurascentia, spinis duobus distantibus terminata.

rufipennis. 4. *B. atra nitida*, elytris bidentatis sanguineis: sutura nigra.

Long. corp. lin. 7.

Corpus lineari-oblongum, subdepressum, punctulatum, glabrum, nitidum, atrum. *Caput* inter oculos longitudinaliter impressum. *Thorax* sparse punctatus, postice sublobatus, utrinque obtusangulus; lateribus fovea profunde excavatis. Punctum impressum ante scutellum, et unum utrinque in ipso margine postico. *Elytra* striata: striis punctatis, sanguinea: sutura atra, apice bidentata: dentibus brevissimis approximatis.

decemmaculata. 5. *B. sulphurea*, elytris tridentatis atris: maculis quinque luteis, pedibus violaceis.

PLATE

PLATE XXIII. FIG. 3.

Long. corp. lin. 6.

Corpus lineari-oblongum, punctulatum, glabrum, obscuriusculum, subtus sulphureum. *Caput* nigro-æneum, inter oculos postice canaliculatum: antice macula lanceolata sulphurea. *Antennæ* nigrae. *Thorax* nigro-æneus: lateribus sulphureis, dorso obsolete canaliculatus, ante scutellum impressus. *Scutellum* triangulare, atrum: disco antice impresso. *Elytra* striata: striis punctatis, atra: maculis quinque luteis, prima nempe subrotunda ad scutellum, secunda oblonga laterali ad humeros, tertia transversa ante medium, quarta lunata pone medium, ultimo in apice subtriangulari minori, luteis. Apex ipse dentibus tribus parvis, intermedio longiori, armatus. *Postpectus* medio et lateribus macula nigra. *Pedes* violacei.

cuprifera. 6. B. supra nigro-ænea, rugulosa, elytris serrulatis: vitta laterali cupreo-aurata, margine violaceo.

Long. corp. lin. $5\frac{3}{4}$.

Corpus oblongum, depressum, subtus nitidum, viridi-æneum, punctulatum, parva pube pilosulum, supra minutissime rugulosum, nigro-æneum, obscuriusculum, glabrum. *Caput* inter oculos punctis impressis valde excavatis quasi reticulatum. *Antennæ* thoracis fere longitudine, filiformes, subserratae. *Thorax* transversus, utrinque postice subimpressus. *Scutellum* minutissimum, apice rotundatum, lævissimum. *Elytra* acuta, a medio fere ad apicem minutissime serrulata: vitta laterali subflexuosa fulgide cuprea: margo ipse lateralis violaceus.

cupriceps. 7. B. viridi-aurata, elytris serratis punctato-striatis, capite cupreo, ano bispinoso.

Long. corp. lin. $5\frac{1}{2}$.

Corpus

Corpus lineari-lanceolatum, subdepressum, punctatum, nitidum, viridi-auratum. *Caput* obscuro-cupreum. *Antennæ* filiformes, æneæ, subserratæ. *Thorax* postice latior, puncto impresso ante scutellum. *Scutellum* subquadratum. *Elytra* seriatim punctata, basi impressa, a medio serrata, apice truncata, trispinosa. *Anus* spinis duabus minutis armatus.

fissiceps. 8. *B. ænea*, elytris integerrimis sericeis substriatis, basi lobatis, capite emarginato.

PLATE XXIII. FIG. 4.

Long. corp. lin. 4.

Corpus oblongum, subdepressum, æneum, subtus albido-pilosum. *Caput* inter oculos profunde impressum, quasi bifidum, in vallecule funde carinatum. *Antennæ* filiformes haud serratæ. *Thorax* lineolis plurimis dorso concentricis insculptus, postice lobatus: lobo truncato. *Scutellum* minutum acuminatum. *Elytra* striato-punctata: punctis quasi concatenatis, rugulis transversis minutissimis sericea, basi apud scutellum lobata: lobo rotundato.

(*Cebrionidæ.*)

RHIPICERA Latr.

femorata. 9. *R. atra*, thorace elytrisque punctis albis irroratis, femoribus rufis.

Long. corp. lin. 8.

Habitat in Australasiæ insulis dictis *Kent's Islands* in freto dicto *Bass's Straits*.

R. mystacinæ affinis. *Corpus* lineare, subcylindricum, nigrum, subtus pube albida incanum. *Caput* punctulatum, inter antennas impressum. *Antennæ* multiarticulatæ, atræ, flabellatæ: ramulis ultra 30 linearibus compressis elongatis, primis quatuor

tuor abbreviatis. *Mandibulæ* protensæ, primum divergentes, dein convergentes, intus bidentatæ: dentibus rotundatis, apice acutissimæ. *Thorax* brevis, subcylindricus, postice paulo latior, ante scutellum impressus, punctis difformibus piloso-niveis utrinque præcipue irroratus. *Scutellum* rotundatum, disco excavatum. *Elytra* punctata: lineis quinque longitudinalibus elevatis interiori postice dimidiata, punctis plurimis sparsis piloso-niveis variegata. *Femora* rufa, apice nigra.

(*Scarabæidæ.*)

SCARABÆUS Latr.

Juba. 10. *S.* thorace antice retuso subcornuto, clypeo reflexo cornu brevi recurvo, elytris castaneis cinereo-punctatis.

Long. corp. lin. 13.

Habitus fere *S. sylvani* Fabr., et *S. Ascanii* Kirby. *Corpus* oblongum, nitidum, subtus piceum, pubescens. *Caput* nigrum, confluentem punctatum, postice lævius. *Clypeus* reflexus, apice truncatus, cornu brevi punctato, subrecurvo, obtusiusculo armatus. *Thorax* niger, lævis, levissime attamen et sparse punctulatus: punctulis sine lente forti omnino inconspicuis, postice repandus, antice retusus: fovea parva; fundo ruguloso. Cornu parvum, brevissimum in ipso margine antico. *Elytra* castanea, subseriatim punctata: punctis excavatis pollinoso-cinereis. *Tibiæ* anticæ tridentatæ.

BOLBOCERAS Kirby.

Labrum transversum.

Labium bipartitum: laciniis oblongo-quadratis.

Mandibulæ corneæ, supra concava, altera apice bidentata: dente interiori longiori acuto.

Maxillæ apice bilobæ: lobis ciliatis; interiori minuto, exteriori subcuneiformi: angulo apicis intus producto acutissimo.

Palpi filiformes.

Mentum subquadratum, integrum.

Antennæ undecim-articulatæ: articulo primo subclavato extus minutissimo, secundo cylindrico, proximis sex transversis, ultimis tribus clavam maximam compressam suborbiculatam, pilosam, articulo intermedio sæpius penitus tecto et abdito, formantibus.

GEOTRUPES Latr.

Labrum transversum, integrum.

Labium bifidum: lobis rotundatis.

Mandibulæ corneæ, arcuatæ, edentulæ, acutæ, supra concavæ.

Maxillæ lobo exteriori trigono, apice scopigero: scopa densa, rigida, trigona.

Palpi filiformes.

Mentum suborbiculatum, apice profunde emarginatum.

Antennæ undecim-articulatæ: articulo primo incrassato clavato piloso, secundo brevissimo sequentibus crassiori obconico, sex proximis magnitudine sensim crescentibus, ultimis tribus clavam subovatam obscuram papillosam, intermedio semper aperto, formantibus.

These two sets of characters are designed to point out the differences between two distinct families of *Scarabæidæ* that have hitherto been considered as belonging to the same genus. *Sc. mobilicornis* Linn. (of which *Sc. testaceus* Fabr. is only a variety), *quadridens* Linn., *farctus* Fabr., *Lazarus* Fabr., *Cyclops* Oliv. &c., belong to one of these families; and *Sc. Typhæus* Linn., *dispar* Fabr., *Momus* Fabr., *stercorarius* Linn., *foveatus* Marsh., *Mutator* Marsh., *splendidus* Fabr., *sylvaticus* Fabr., *hemisphæricus* Oliv., and *vernalis*

lis

lis Linn., &c. to the other. Whoever considers these characters, and compares these sets of insects with each other, will be immediately convinced that, according to the modern system, they ought to constitute different genera. The mandibula of one side (in some the right-hand one and in others the left) bidentate at the apex; maxillæ with the outer lobe truncated at the apex, the inner angle acuminate, and narrowest at the base, and ciliated; the quadrate entire mentum; and above all the compressed, orbiculate, shining, punctate, hairy clava of their antennæ, the exterior lamellæ of which usually inclose the intermediate one as entirely as the valves of a bivalve shell the animal which inhabits it, distinguish the former of these tribes, to which I have long given the generic name of *Bolboceras*; whereas the other, the true *Geotrupes*, or earth-borer, is remarkable for mandibulæ without teeth; maxillæ with a prismatic exterior lobe terminating in a brush of stiff dense hairs; an orbicular deeply-emarginate mentum; labium with rounded lobes; and antennæ with a subovate clava, the third joint of which is always apparent, and all its joints exhibiting a downy appearance, but having no hairs. The body of the former also is more hemispherical than that of the latter, and the clypeus is not rhomboidal.

Geotrupes vernalis seems to connect these two genera; its body approaching to an hemispherical form; its labrum, though not emarginate, terminating in a concave line; and its mandibulæ having two teeth at the end. It differs from both in having the interior tooth the shortest, and the exterior edge of the mandible sinuate. In most other respects it agrees with *G. stercorarius*, &c. In *Bolboceras Cephus* the middle joint of the clava of the antennæ is not so wholly shut up between the two exterior ones as to be entirely hidden by them. In other respects it agrees with the rest. My details of *Bolboceras* were taken from *B. quadridens*,
 3 0 2 and

and those of *Geotrupes* from *G. stercorarius*. I shall now describe a new species of the former genus from Mr. Brown's collection.

Australasiæ. 11. *B. testaceus*, thorace punctatissimo antice retuso, clypeo obtuse carinato.

PLATE XXIII. FIG. 5.

Long. corp. lin. 9.

Corpus oblongo-hemisphæricum, totum testaceum, subtus pubescens. *Caput* antice confluentem, postice sparse punctatum. *Clypeus* antice rotundatus, marginatus: margine subreflexo, supra carinatus; carina transversa, obtusa, utrinque abbreviata. *Mandibula* sinistra a tergo bidentata: dente exteriori obtuso. *Labrum* late emarginatum. *Palpi* articulo extremo elongato, sublanceolato. *Antennæ* clava magna, compressa, exacte orbiculata, nitida, punctata, lamella intermedia penitus clausa. *Thorax* transversus et fere lunatus, confluentem punctatissimus: dorso postice longitudinaliter læviori punctulis sparsis, utrinque obtusangulus et puncto ordinario majori impressus, antice retusus: fovea subtriangulari, prominentia obsoleta triplici. *Elytra* striata: striis ex punctis impressis crenatis. *Tibiæ* anticæ serratæ: serraturis nigris. *Tibiarum calcaria* longissima.

TROX Fabr.

spurius. 12. *T. oblongus*, scaber, subcinereus, elytris seriatim papillatis.

Long. corp. lin. 5.

Intermedius inter *Trogem* et *Melolontham*, et forsan proprii generis. *Corpus* oblongum, nigrum, glabrum, obscurum, punctis papillatis et centro oblongo eminentibus pallidis subcinereum et scabrum. *Caput* suborbiculatum, deflexum, inæquale: clypeo

peo reflexo antice subemarginato. Os concursu labri et menti omnino clausum: labio, mandibulis maxillis palpisque labialibus penitus tectis. *Palpi maxillares* articulo extimo præcedentibus majori, subarcuato, basi tenuiori. *Mentum* magnum, elevatum, dorso depressum, triangulari-cordatum. *Antennæ* novem-articulatæ: articulo primo subglabro longiori, secundoque brevi, clavatis, apice incrassatis; tertio graciliori, clavato; quarto brevissimo, subcylindrico; quinto et sexto subpateræformibus, transversis; clava lamellis tribus lanceolatis acutis. *Thorax* transversus, antice emarginatus, postice obsolete obtusangulus, lateribus rotundatis, dorso utrinque tri-impessus. *Elytra* punctis papillatis seriatim ordinatis, seriebus plurimis. *Tibiæ anticæ* obtuse tridentatæ.

Not being able to come at the trophi (*Instrumenta cibaria* Fabr.) of this insect, I cannot clearly ascertain whether it belongs to *Trox* or *Melolontha*. Its habit, stature, and closed mouth are nearly those of the former genus; but the first joint of the antennæ is not hairy as in that, its abdomen not vaulted and flat, and the anterior pair of tibiæ are not without teeth.

MELOLONTHA Fabr.

sericea. 13. *M. viridis*, supra sericea subtus piloso-incana, pedibus rufis, clypeo elongato emarginato.

Long. corp. lin. $5\frac{1}{2}$.

Affinis *M. aulicolæ* Fabr. et *M. aurulentæ* Kirby, sed distincta.

Corpus oblongum, viride, sericeo-nitidum, subtus ex pilis albis decumbentibus incanum. *Caput* inclinatum, ex punctis confertis impressis quasi reticulatum. *Clypeus* elongatus, antice profunde emarginatus: margine omni reflexo. *Palpi maxillares* niveo-pilosi. *Maxillæ* basi apertæ, magnæ. *Mentum* obtriangulare. *Antennæ* pallide rufæ, decemarticulatæ: articulo secundo

secundo sequentibus longiori; clava fusca. *Oculi* septo ciliato: cilia nivea. *Thorax* subconicus, conflenter punctatissimus, dorso subcanaliculatus, lateribus subspinosus impressis. *Scutellum* acuminato-triangulare, lævissimum. *Elytra* subseriatim punctata: lineis duabus longitudinalibus elevatiusculis. *Pedes* rufi, niveo-pilosi. *Tibiæ anticæ* apice subsinuatae, vix dentatae. *Tarsi* unguiculis apice bifidis. *Abdomen* ventre valde convexo et fere gibbo.

CETONIA Fabr.

atropunctata. 14. *C. olivacea*, clypeo elongato bifido, elytris punctis sex vel octo atris.

Long. corp. lin. 12.

Habitat in Australasia. Apud Port Jackson a D. Brown in Mimosa lecta.

Corpus nitidum, olivaceum, supra glaberrimum, subtus pubescens. *Caput* deflexum, punctatum. *Clypeus* elongatus, apice bifidus: lobis obtusis, margine incrassatus. *Palpi* subclavati. *Thorax* triangularis, antice truncatus: angulis porrectis acutis, postice sublobatus: lobo emarginato, sparse punctatus: margine laterali incrassato, subrepando. *Scutellum* triangulare, lævissimum. *Elytra* punctata, at vix seriatim, punctis impressis, subrugosa, basi læviuscula: punctis tribus atris in triangulo obtusangulo ordinatis, uno minori semicirculari apud scutellum, altero majori extus in medio, tertio minori intus pone medium, rotundis. Apice mucronata sunt elytra: mucrone brevissimo. *Postpectus* in medio, et abdomen subtus segmentis quatuor primis, nigris. *Poststernum* porrectum, apice triangulare. *Coxæ anticæ* tuberculo parvo subtriangularem fusco prope apicem inserto. *Tibiæ anticæ* acute tridentatae. *Tarsi* unguiculis duobus compressis, truncatis.

Var. β. elytris punctis octo atris. D. MacLeay.

Brownii.

Brownii. 15. *C. castanea*, capite, thoracis disco, scutello, pectoreque nigris, clypeo elongato bifido.

PLATE XXIII. FIG. 6.

Long. corp. lin. $13\frac{1}{2}$.

Habitat in Australasia, apud Port Jackson.

Corpus obovatum, glaberrimum, nitidum, læve. *Caput* atrum. *Clypeus* elongatus, bifidus: lobis divergentibus, utrinque impressus, margine incrassato. *Antennæ* castaneæ. *Thorax* vix a præcedente differt quoad figuram, sed anguli antici haud protensi et latera rotundata, levissime punctulatus, castaneus: margine antico et postico, et macula magna dorsali sublobata, atris. *Scutellum* triangulare atrum. *Elytra* levissime, ast seriatis, punctulata, castanea; basi humeris suturaque, atris: *Pectus* et *Postpectus* atra. *Pedes* atris: tibiis castaneis apice atris. *Abdomen* nigro-castaneum. *Anus* lineolis transversis insculptus.

Horum insectorum collectori Botanices Australasiæ elucidatori eximio, Ordinum plantarum Naturalium docto et lynceo extricatori D. R. Brown, S.R.S. Bibl. L.S. hoc insectum ab illo lectum merito dicatur.

brunnipes. 16. *C. supra viridis*, thoracis lateribus, punctisque duobus dorsalibus elytrorumque plurimis, albis, pedibus brunneis.

Long. corp. lin. $5\frac{3}{4}$.

Affinis admodum videtur *C. aulicæ* Fabr. sed multo minor et distincta. *Corpus* obovatum, subtus nitidiusculum, nigrum, pilosulum, polline pallido variegatum; supra viride, obscurum. *Caput* deflexum, punctatum, postice lunula interrupta pollinoso-alba. *Clypeus* apice emarginatus, subreflexus. *Palpi* cum antennis brunnei. *Thorax* quoad figuram fere ut in præcedente,
dente,

dente, sed latera obsolete obtusangula, et postice haud lobatus, ante scutellum tamen emarginatus: lateribus margine punctisque duobus dorsalibus distantibus pollinoso-albis, lineolis arcuatis sparsis insculptus. *Scutellum* elongatum, triangulare, læve: lineola utrinque pollinoso-alba. *Elytra* pone humeros sinuata, punctis lineolisque sparsis pollinoso-albis picta, lineolis, interdum duplicatis interdum figura ferri equini, insculpta: lateribus ante apicem, apiceque ipso, obscure brunneis. *Pedes* setosi, brunnei. *Tibiæ anticæ* acute tridentatæ. *Podex* rugosus: maculis quatuor, interioribus majoribus, pollinoso-pallidis. *Abdomen* subtus lineolis arcuatis setigeris insculptum.

COLEOPTERA HETEROMERA.

(*Tenebrionidæ.*)

ADELIIUM Kirby.

caraboides. 17. A. nigrum, thorace postice utrinque angulato, elytris porcatis: porcis alternis catenulatis.

PLATE XXIII. FIG. 7.

Carabus porcatus apterus, ater, elytris striatis apice granulatis. *Fab. Ent. Syst. Em. i. 147. 101.*

Calosoma porculatum. *Fab. Syst. Eleuth. i. 211. 3.*

Long. corp. lin. $7\frac{2}{3}$.

Facies omnino *Carabi* sed hujus generis. *Corpus* subdepressum, nitidum, glabrum, nigrum. *Caput* subtriangulare, ex punctis excavatis confluentibus postice rugosum, antice inter antennas transverse elevatum. *Antennæ* fere filiformes, thorace longiores. *Thorax* planiusculus, transversus, ex punctis impressis confluentibus valde rugosus, antice emarginatus, postice transversus: angulis lateralibus extantibus, subrecurvis, utrinque marginatus:

tus: margine explanato rotundato. *Scutellum* apice rotundatum, punctatum. *Elytra* porcata: porcis crenatis, alternis crenatis, vel ex punctis oblongis elevatis, ut in *Carabis* pluribus obtinet, constantibus.

Obs. Porci omnes in apice elytri interrupti sunt.

I did not discover that *Adelium caraboides* had been described by Fabricius till after the figures illustrative of this paper were drawn; and as the insect here given confirms the genus I had laid down in my former paper, and is another instance of its species imitating the form and appearance of the *Carabidæ*, I think it may be interesting to Entomologists, particularly on account of Mr. Curtis's excellent figure, if I retain it. I have altered Fabricius's trivial name, as the insect certainly is neither a *Carabus* nor a *Calosoma*, to make it harmonize with those of the species before described.

HELÆUS Latreille.

* Thorace antice bipartito, ante caput protenso.

Brownii. 18. *H. ater*, glaberrimus, thorace caput ambiente, coleoptris disco elevato granulato: sutura carinata.

PLATE XXIII. FIG. 8.

Long. corp. lin. 9.

Affinis *H. perforato* Latr. sed dimidio minor. *Palpi maxillares* articulo extimo minori, subpetiolato. *Coleoptra* glaberrima, haud punctata, granulis quibusdam subseriatim notata. *Sutura* in carinam elevata. *Sternum* vix carinatum. Alias similis.

This family of the genus *Helæus* presents some of the most singular insects in nature. The lobes of the thorax meet over the head,

head, and by their union, by means of a sinus cut out of their inner side, form a round hole where the vertex of the head appears and part of the eyes, so that the animal is thus enabled to see things above it as well as below it. The anterior part of the head is below the thorax.

** Thorace haud caput ambiente.

piceus. 19. *H. fusco-piceus* glaber, thorace emarginato, elytris seriatim punctatis.

Long corp. lin. $6\frac{2}{3}$.

Forsan ad aliud genus amandandum. *Corpus* oblongo-ovale, totum glaberrimum, obscuriusculum, fusco-piceum. *Caput* postice angustius, levissime punctulatum. *Labrum* transversum, apice rotundatum. *Labium* transversum, rotundatum. *Mentum* fere pentagonum. *Palpi* maxillares quadriarticulati: articulo extimo magno, sed haud maximo, securiformi. *Clypeus* apice subemarginatus. *Thorax* semicircularis, segmento circuli antice dempto, postice subrepandus: lateribus marginatis, levissime punctulatus; dorso valde convexo. *Elytra* seriatim punctulata, marginata: margine subreflexo. *Epipleura* lata, lævis.

COLEOPTERA TETRAMERA.

(*Curculionidæ*.)

EURHINUS Kirby.

muricatus. 20. *E. niger*, piloso-subincanus, elytris basi subcristatis: granulis tuberculisque acutis elevatis scabris.

Long. corp. (Rostro excluso) lin. 8.

Corpus obcuneiforme, plus minus piloso-incanum. *Caput* rugulosum, postice læve, inter oculos canaliculatum. *Rostrum* thoracis

thoracis longitudine, pone antennis punctatum. *Antennæ* rostro pone apicem insidentes, thoracis fere longitudine, basi vix moniliformes: articulis tribus primis subclavatis, proximis quinque obconicis, sensim brevioribus et majoribus, ultimis tribus fere ut in *E. læviori* K. *Thorax* teretiusculus, rugosus. *Coleoptra* oblonga, granulata, striata: striis punctatis; punctis profunde excavatis; dorsalium interstitiis tuberculorum acutorum serie, apud scutellum utrinque crista obsolete elevata tuberculis acutis muricata. *Pedes* antici longiores: femoribus incrassatis.

CURCULIO Linn.

mirabilis. 21. *C. fuscus*, rostro brevissimo, thorace confertim elytrisque seriatim nodulosis, ventre masculo postice aperto.

PLATE XXIII. FIG. 9.

Long. corp. (Rostro excluso) lin. 10.

Corpus lineari-oblongum, obscurum, nigro-fuscum. *Caput* squamulis luteo-pallidis consitum. *Rostrum* brevissimum, crassissimum, subcylindricum, supra inæquale, canaliculatum, apice emarginatum. *Mandibulæ* maximæ, subtrapeziformes, intus lævissimæ, glaberrimæ, nitidissimæ, extus pallido-squamulosæ: pilis nigris intermixtis; vertice extus excavatæ. *Antennæ* fractæ: articulis 4^o, 5^o, 6^o, 7^o globosis, quatuor ultimis clavam lanceolato-rhomboidalem acutam arctissime imbricatam et fere subsolidam formantibus. *Thorax* depressus, suborbiculatus, dorso subimpressus, antice subconstrictus, confertissime nodulosus. *Elytra* subporcata, seriatim nodulosa: nodulis parvis setigeris, apice obtusa et ad suturam submucronata. *Femora* inermia. *Tibiæ* vix calcaratæ. *Venter* segmentis duobus ultimis ut videtur quasi circulo dempto, adeo ut patent interiora;

sed revera deflexa est horum segmentorum pars media. Ex fundo cavitatis laminæ duæ, latæ, compressæ, obcuneatæ, apice rotundatæ, lævissimæ, glaberrimæ, nitidæ emergunt, et postice utrinque in margine ipso circuli setarum rigidissimarum fasciculi, vel potius pectines duo. Basi late excavatus est venter.

Var. Sexus alter: mandibulis trigonis obscuris, rugosis setosis, acutis, thorace vix impresso, ventre integro: cavitate nulla.

I know no insect amongst the *Curculionidæ* (except one of the same tribe with this in Mr. MacLeay's cabinet with an anal forceps, something like that of an earwig,) that is so wonderfully formed as the species here described. The ventral cavity, laminæ, and pecten have no parallel that I am aware of in the insect world. These organs are probably for sexual purposes, since the other sex, if I am not mistaken in supposing the variety I have described merely sexual, is without them.

(*Cerambycidæ.*)

STENOCORUS Fabr.

punctatus. 22. St. piceus, thorace spinoso, elytris excavato-punctatis, pallido nebulosis.

Long. corp. lin. 14.

Corpus lineare, subdepressum, piceum, nitidum, subtus pilosoincanum. *Caput* subinclinatum, subtus transverse rugosum: gula in medio lævissima, supra subpilosum postice rugosum, inter antennas canaliculatum. *Labrum* transversum: disco depresso. *Labium* bilobum: lobis divaricatis pilosis. *Mandibulæ* incurvæ, acutæ, supra rugosæ. *Maxillæ* apertæ: lobo exteriori elongato scopigero, interiori brevi ciliato. *Palpi* articulo extimo semicordato, *maxillares* longiores. *Mentum* transversum,

versum, apice rotundatum. *Antennæ* breviores, rufo-piceæ; articulis quinque intermediis extus apice spina armatis. *Thorax* rugosus, utrinque spina acuta valida, antice et postice constrictus, dorso verrucis s. tuberculis quinque, in quincunce ordinatis, complanatis. *Scutellum* piloso-cinereum. *Elytra* excavato-punctata: punctis magnis profundis, piceo pallidoque varia, apice bispinosa. *Pedes* dilute picei.

DISTICHOcera MacLeay.

Labrum transversum, tetragonum.

Labium membranaceum, apice bilobum: lobis divaricatis.

Mandibulæ trigonæ, edentulæ, apice incurvæ, acutæ.

Maxillæ basi apertæ.

Palpi filiformes.

Mentum transversum, trapeziforme.

Antennæ sensim crassiores, disticho-ramosæ.

This genus, named long ago, as above, by Mr. MacLeay, connects *Cerambyx* with *Molorchus*, *Necydalis*, and *Rhagium*. With the latter indeed it has little other connexion than from the similar shape of its elytra, which grow gradually narrower towards the apex; from *Cerambyx* it is distinguished by its antennæ; and from *Molorchus* and *Necydalis* by its elytra, scarcely at all shorter than the wings, and by its disticho-ramose antennæ.

maculicollis. 23.

PLATE XXIII. FIG. 10.

Long. corp. lin. 8.

Corpus fere cuneiforme, subtus pilis argenteis nitidum, supra nigrum, obscurum. *Caput* subcordatum, pilosum, canaliculatum, utrinque ante antennis carinatum. *Oculi* brunnei. *Antennæ* breviores, nigræ: articulis omnibus apice biramosis (duobus primis brevissime); ramis oppositis compressis vertice rotundatis,

tundatis, sinistris paulo longioribus, articulo extimo simplici clavato. *Thorax* subcylindricus: maculis quatuor dorsalibus quadratim ordinatis. *Elytra* cuneiformia: lineis tribus longitudinalibus elevatis; striga apud scutellum et alia majori in medio apud suturam, piloso-argenteis, apice truncata. *Femora* brunnea. *Tibiæ* bicalcaratæ. *Alæ* elytris longiores.

MOLORCHUS Fabr.

cingulatus. 24. M. niger, elytris dimidiatis luridis, apice macula alba, abdomine cingulis tribus niveis.

Long. corp. lin. 11.

Corpus lineare, subtus atrum, pilis albis maculosum. *Caput* inclinatum, subcordatum, medio canaliculatum, utrinque sub antennis carinatum, ex punctis confluentibus rugulosum. *Clypeus* a fronte linea impressa separatus, pentagonus, vel rhomboidalis: angulo antico truncato. *Antennæ* mediocres, apicem versus crassiores, nigræ. *Thorax* brevis teretiusculus, antice constrictus, postice impressus, lateribus caput versus obtusangulis, confluentibus punctulatis. *Scutellum* nigrum. *Elytra* brevissima, oblique truncata, confluentibus punctulata, lurida: lateribus deflexis fuscescentibus, apice in medio macula triangulari pilosa alba. *Alæ* nigricantes, corporis longitudine. *Pedes* brunnei: femoribus dilutioribus. *Abdomen* cingulis tribus piloso-niveis circumcinctum.

(*Lepturidæ*.)

LEPTURA Linn.

ceramboides. 25. L. nigra, thorace subspinoso antice constricto, elytris croceis, ore pedibusque rufis.

PLATE XXIII. FIG. 11.

Long. corp. lin. $7\frac{3}{4}$.

A habitu

A habitu generis omnino recedit, *Cerambycibus* propior. *Corpus* lineare, angustum, nitidum, glabriusculum, nigrum. *Caput* porrectum, oblongiusculum, subtus et antice rufum, inter oculos canaliculatum, ante antennis declive. *Labrum* transversum, minutum. *Labium* apice bifidum: lobis divaricatis. *Mandibulae* trigonae, subforcipatae, acutae. *Maxillae* basi apertae. *Palpi* breves, filiformes. *Mentum* transversum, quadrangulum. *Antennae* submediocres: articulis intermediis subtus barbatis. *Oculi* subtriangulares, prominuli. *Thorax* antice valde angustatus et late constrictus, utrinque subspinosus, supra quadrituberculatus: tuberculis complanatis, anticis approximatis. *Elytra* punctulatissima, obscura, elevato-quadrilineata, crocea: sutura in medio violacea. *Pedes* rufi.

This species approaches very near to *Stencorus suturalis* of Olivier (iv. no. 69. 29. 25. t. 3. f. 29.); but in his insect the legs are black, the thorax has only two tubercles, and the base of the exterior margin as well as that of the suture is violet; whereas in *L. ceramboides* the legs are red, the thorax has four tubercles, and only the suture is violet. His insect also comes from a different country, being a native of the East Indies. These two species form a distinct section of *Leptura*, or perhaps a new genus.

(*Chrysomelidae*.)

CHRYSOMELA Linn.

Curtisii. 26. *C. oblonga*, sanguinea, thoracis vitta, elytrisque disco, aurato-viridibus.

PLATE XXIII. FIG. 12.

Long. corp. lin. 4.

Corpus oblongum, sanguineum. *Caput* punctulatum. *Antennae* extorsum crassiores, compressae, nigrae, basi rufae. *Thorax* transversus,

versus, punctatus, antice utrinque puncto vittaque dorsali angusta cyaneo-viridibus. *Scutellum* viride. *Elytra* vage punctata: disco aurato-viridi. *Postpectus* utrinque viride. *Pedes* genubus tarsisque nigris.

Ab insectorum pictori eximio, collectori strenuo, indagatori assiduo, cordato, D^o Johanni Curtis Norvicensi, hoc pulchellum insectum nomen mutuatur.

HEMIPTERA.

(*Cimicidæ.*)

SCUTELLERA Lam.

Dux. 27. *S. viridis*, supra cyanea, scutello basi macula biloba, abdomine, lateribus, femoribusque, aurantiacis.

Long. corp. lin. 6.

Corpus ex ovali subheptagonum, viride, punctulatum. *Caput* triangulare, subtus gula flava utrinque puncto nigro. *Rostrum* nigrum, basi rufum. *Antennæ* nigrae. *Thorax* antice lævis viridis: lineola transversa obscura rufa, postice convexus cyaneus punctulatus utrinque obtusangulus. *Scutellum* cyaneum: antice macula magna transversa postice biloba aurantiaca. *Postpectus* cyaneo maculatum. *Alæ* nigrae. *Pedes* villosi, cyanei: femoribus rufis. *Abdomen* lateribus dentato-aurantiacis.

(*Cicadiadæ.*)

ACHILUS Kirby.

Frons tricarinata.

Labrum vix distinctum, cum clypeo in medio coalitum.

Antennæ suboculares biarticulatae: articulo primo brevissimo cylindrico, secundo paulo crassiori tereti, lævi, setigero.

Thorax brevissimus, antice subrepandus, postice obtusangulus: angulo caput spectante.

The

The situation of the antennæ of the insect from which I have formed this genus, agrees with that of *Fulgora*; but in all the genuine species of the latter their second joint is much larger than the first, globose, and covered with papillæ: whereas in *Achilus* it is not remarkably larger than the first, is rather tapering, and without papillæ. The labrum also is not separated from the clypeus, except on the sides, by any suture or even impressed line; the thorax a good deal resembles that of *Fulgora*, but it is more completely obtusangular.

flammeus. 28. A.

PLATE XXIII. FIG. 13.

Long. corp. lin. 6.

Corpus sanguineum, immaculatum. *Caput* vertice transverso quadrangulo, postice segmento circuli dempto. *Frons* inflexus, vix a clypeo separatus, tricarinatus. *Clypeus* cum labro in medio connatus. *Oculi* hemisphærici, albi, laterales, postici. *Antennæ* sub oculis insertæ, biarticulatæ: articulo primo brevissimo cylindrico, secundo longiori paulo crassiori teretiusculo, haud papillato, setigero. *Ocellus* utrinque intus inter oculos et antennas ad clypeum situs. *Thorax* brevis, postice sinuatus: sinu magno obtusangulo, antice repandus. *Metathorax* cum *Scutello* fere rhomboidalis. *Elytra* corpore longiora, plana, oblonga, latere exteriori et apice rotundata, intus subsinuata. *Alæ* plicatiles, elytris paulo breviores, apice latiores obliquæ rotundatæ. *Pedes* angulati: tibiis posticis apice calcaribus et spinulis semicoronatis. *Anus* flosculiferus*.

* By this term we designate an anus terminated by a process resembling a floret. Ex. *Fulgora candelaria*.

HYMENOPTERA.

(*Sphegidæ.*)

THYNNUS Fabr.

annulatus. 29. T. fulvescente-villosus, thorace obscure ferrugineo nigro maculoso, abdomine flavo: segmentis utrinque annulo nigro.

Long. corp. lin. 15½.

Corpus nigrum, pube densa satis fulvescenti vestitum. *Caput* subtriangulare: ore flavo. *Clypeus* flavus, postice macula dorsali longitudinali subcampanulata nigra. *Antennæ* nigræ. *Truncus* oblongus, quadrangulus, fulvus: maculis quibusdam obscuris dorsalibus nigris. *Pedes* fulvi: coxis posterioribus basi nigris. *Alæ* corporis fere longitudine, fuscescentes. *Abdomen* lineari-lanceolatum, basi retusum, apice deflexum, flavum: segmentis apice annulisque duobus latere exteriori interruptis, nigris. *Podex* macula nigra. *Venter* segmentis utrinque lunula, strigaeque intermedia, nigricantibus; ultimo spina acuminata armato.

*variabilis**. 30. T. rufus, nigro maculosus, abdomine atro: segmentis quinque anticis supra et infra flavo maculatis.

Long. corp. lin. 13.

Corpus fere lineare, mollissime sed vix dense fulvo pubescens. *Caput* flavum: vertice macula magna angulata nigra. *Antennæ* thoracis fere longitudine, setaceæ, nigræ. *Truncus* subglobosus, supra fulvus: antice fasciis duabus vitta intermedia connexis,

* I adopt this name from the MSS. of Dr. Leach, who observes that this species varies considerably. He possesses four varieties, and Mr. MacLeay a fifth.

nigris,

nigris, disco nigro: lineolis duabus obliquis rufis, subtus fulvus, spatio inter pedes primi paris et posteriores nigro utrinque fulvo strigoso. *Pedes* rufo-fulvi. *Alæ* corpore longiores fuscescentes. *Abdomen* ovato-lanceolatum, vel fere cuneiforme, nigrum, segmento primo flavo: apice, maculis duabus, cruceque, nigris, intermediis quatuor nigris: maculis quatuor flavis transverse digestis. *Venter* segmentis anticis fascia flava, ultimis interruptis, anali mucronato.

(*Apidæ.*)

XYLOCOPA Latr.

Australensis. 31. X. cyanea, supra viridis, alis violaceis, capite anoque villosis-albis.

Long. corp. lin. 8.

Corpus oblongum, subtus cyaneum: pube nigra. *Caput* orbiculatum, viride: vertice cyaneo tincto, totum villosis-album. *Antennæ* nigrae, subtus piceae: stipite viridi-æneo. *Truncus* supra cyaneo-viridis, punctulatus: disco lævissimo nitido, antice canaliculatus. *Alæ* violaceae. *Pedes* cyanei atro hirti, tarsi postici præcipue. *Abdomen* supra viride, punctatum, nitidum: ano pilis albis ciliato.

(*Formicidæ.*)

FORMICA Linn.

intrepida. 32. F. nigra, trunco pedibusque rufis, capite abdomine majori.

Long corp. lin. 7.

Habitat in Australasia, apud Port Jackson. Formicarum audacissima, strenuissima.

Affinis *F. rufæ*, L. *Corpus* glabriusculum, nigrum. *Caput* triangulare, postice subemarginatum, supra sparse punctatum, et in-

super sub lente forti reticulato-lineatum: areolis minutissimis. *Stemmata* in triangulo in foveolis inserta, sed posteriora duo difficillime cernuntur. *Frons* inter antennis bicarinata: carinulis flexuosis; interstitio canaliculato. *Mandibulae* validissimæ, supra punctatæ, apice sexdentatæ. *Antennæ* rufescentes: stipite nigro. *Clypeus* obtuse carinatus, emarginatus. *Truncus* compressus, cum pedibus rufus; femoribus dilutioribus. *Squama* rufa, integra, pilis subciliata. *Abdomen* subovale, nigrum, subpilosum.

viridis. 33. *F.* glauco-viridis: antennis oreque rufis, abdomine segmentis margine albis.

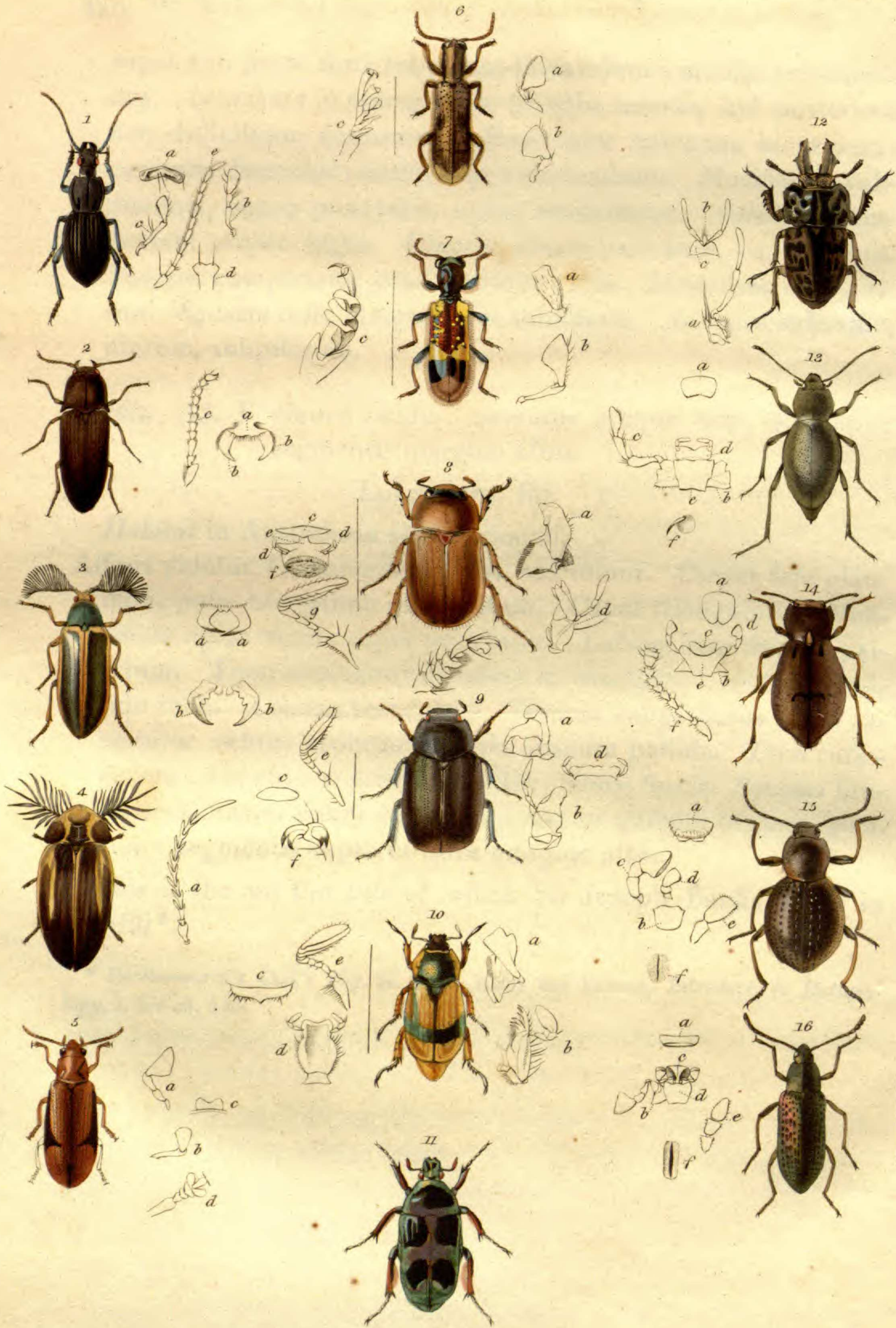
Long. corp. lin. .

Habitat in Australasia septentrionali.

Affinis videtur *F. smaragdinae* Fabr. sed minor. *Corpus* fere glaucum, pube brevissima obscuratum. *Caput* triangulare. *Mandibulae* apice nigræ, supra punctatæ. *Labium* cum *maxillis* pallidum. *Frons* stemmatibus tribus in triangulo. *Antennæ* pallide rufæ. *Clypeus* truncatus. *Truncus* subglobosus dorso saturatior, subtus utrinque macula obscura pallida. *Tarsi* rufescentes. *Alæ* corpore longiores, albæ: neuris fuscis. *Squama* brevissima, crassa, emarginata. *Abdomen* ex globoso ovatum, glaucum: segmentis supra et infra margine albis.

This is the ant the bite of which Sir Joseph Banks found so painful*.

* Hawkesworth's *Cook's Voy.* iii. 223. Kirby and Spence, *Introduct. to Entomology*, i. 3rd ed. 123.



EXPLANATION OF PLATES XXI. XXII. XXIII.

PLATE XXI.

- Fig. 1. *Pelecium cyanipes*.
 a. Labrum. b. Maxillary Palpus. c. Labial ditto. d. Ligula. e. Antenna.
2. *Anelastes Drurii*.
 a. Clypeus. bb. Mandibulæ. c. Antenna.
3. *Rhipicera marginata*.
 aa. Mandibulæ. bb. Ditto of *Rh. femoralis*.
4. *Lampyrus Latreillii*.
 a. Antenna of female.
5. *Eurypus rubens*.
 a. Maxillary Palpus. b. Labial ditto. c. Labrum. d. Tarsus.
6. *Axina analis*.
 a. Maxillary Palpus. b. Labial ditto. c. Tarsus.
7. *Priocera variegata*.
 a. Maxillary Palpus. b. Labial ditto. c. Tarsus.
8. *Geniates barbatus*.
 a. Mandibulæ. b. Maxilla with Maxillary Palpus. c. Labrum. dd. Labial Palpi. e. Labium. f. Mentum with circular beard or brush. g. Antenna. h. Dilated anterior Tarsus.
9. *Apogonia gemellata*.
 a. Mandibula. b. Maxilla with Maxillary Palpus. c. Labrum. d. Labium with Labial Palpi. e. Antenna. f. Part of Tarsus.
10. *Rutela pulchella*.
 a. Mandibula. b. Maxilla with Maxillary Palpus. c. Labrum. d. Labium with Labial Palpi. e. Antenna.

Fig.

Fig. 11. *Cetonia MacLeayi*.

12. *Lucanus nebulosus*.

a. Maxilla with Maxillary Palpus. b. Labium with Labial Palpi. c. Mentum.

13. *Psammodes longicornis*.

a. Labrum. b. Base of Maxilla. c. Maxillary Palpus. d. Labium with Labial Palpi. e. Mentum. f. One of the setigerous puncta of the Thorax.

14. *Scotinus crenicollis*.

a. Labrum. b. Base of Maxilla. c. Labium. d. Maxillary Palpus. e. Mentum. f. Antenna.

15. *Sphaerotus curvipes*.

a. Labrum. b. Mentum. c. Maxillary Palpus. d. Labial ditto. e. Apex of Antenna. f. One of the puncta of the Elytra.

16. *Strongylium chalconatum*.

a. Labrum. b. Base of Maxilla with Maxillary Palpus. c. Labium with Labial Palpi. d. Mentum. e. Apex of Antenna. f. One of the puncta of the Elytra.

PLATE XXII.

Fig. 1. *Eurynotus muricatus*.

a. Labrum. b. Labium. c. Mentum. d. Antenna.

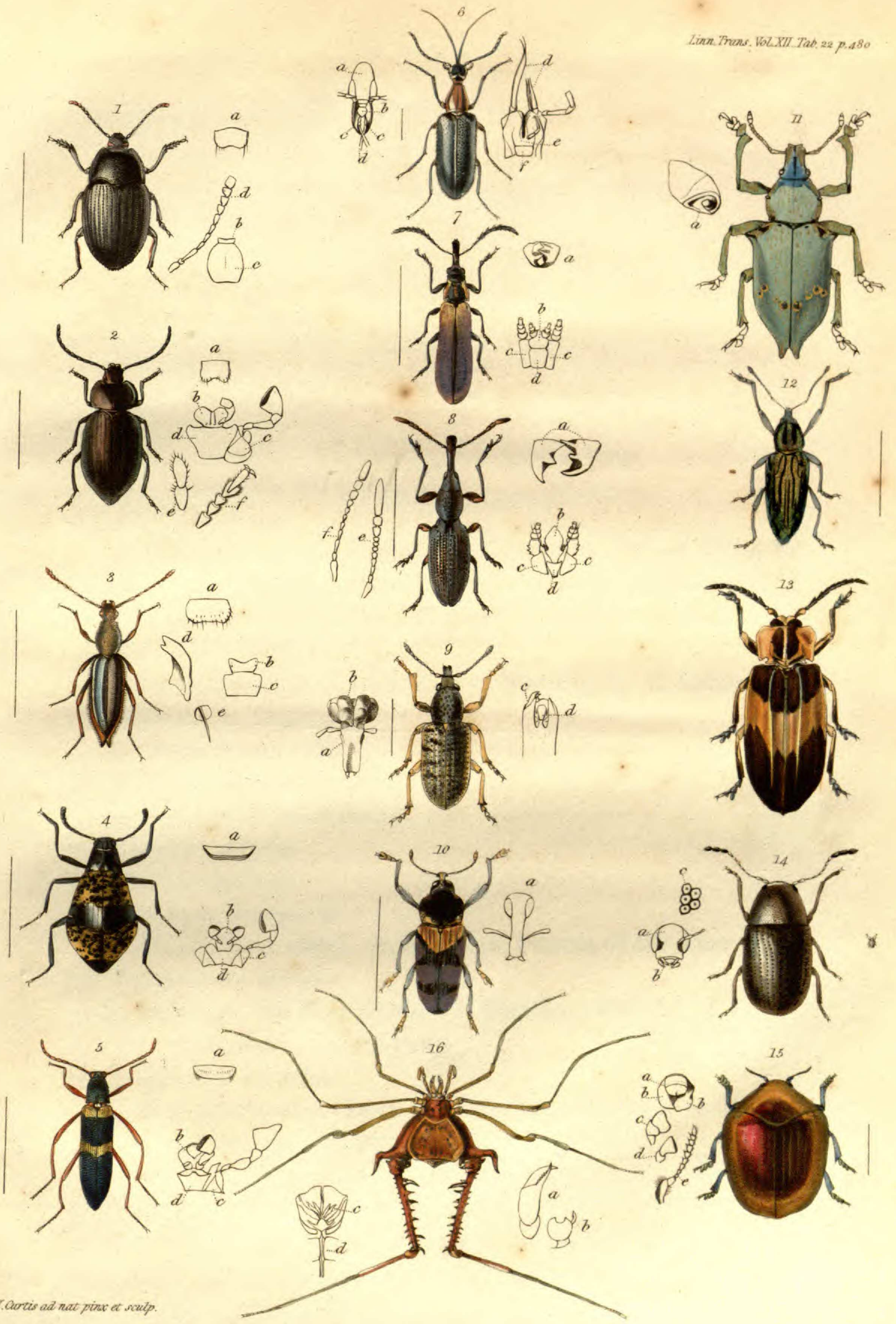
2. *Adelium calosomoides*.

a. Labrum. b. Labium with Labial Palpus. c. Base of Maxilla with Maxillary Palpus. d. Mentum. e. Apex of Antenna. f. Anterior Tarsus.

3. *Oxura setosa*.

a. Labrum. b. Labium. c. Mentum. d. Mandibula. e. One of the setigerous puncta of the Thorax.

Fig.



- Fig. 4. *Spheniscus erotyloides*.
a. Labrum. b. Labium with Labial Palpi. c. Base of Maxillæ with Maxillary Palpus. d. Mentum.
5. *Stenochia rufipes*.
a. Labrum. b. Labium with Labial Palpus. c. Base of Maxilla with Maxillary Palpus. d. Mentum.
6. *Gnathium Francilloni*.
a. Head (front view). b. Labrum. c. Mandibulæ. d. Lobes of Maxillæ. e. Labium. f. Mentum.
7. *Rhinotia hæmoptera*.
a. Mandibulæ. b. Labium with Labial Palpi. cc. Maxillæ with Maxillary Palpi. d. Mentum.
8. *Eurhinus lævior*.
a. Mandibulæ. b. Labium with minute Labial Palpi. cc. Maxillæ with Maxillary Palpi. d. Mentum. e. Antenna ♂. f. Antenna ♀ of another species.
9. *Rhinaria cristata*.
a. Head (front view). b. Crest. c. Mandibula. d. Labium.
10. *Rynchanus Dufresnii*.
a. Head (front view).
11. *Curculio Hancocki*.
a. Apex of Mandibula.
12. *Curculio elegans*.
13. *Prionus Spencii*.
14. *Choragus Sheppardi*.
a. Head (front view). b. Palpi. c. Puncta of the Thorax.
15. *Lamprosoma bicolor*.
a. Labrum. bb. Mandibulæ. c. Maxillary Palpus. d. Labial ditto. e. Antenna.
16. *Gonyleptes horridus*.
a. Mandibula with Chela. b. First joint of ditto. c. Part of Pectus. d. Sternum.

PLATE XXIII.

- Fig. 1. *Buprestis cruentata*.
 2. ———— *phæorhea*.
 3. ———— *10-maculata*.
 4. ———— *fissiceps*.
 5. *Bolboceras Australasiæ*.
 a. Labrum. b. Mandibulæ. c. Labium with Labial Palpus. d. Maxilla with Maxillary Palpus. e. Mentum*. f. Antenna.
 6. *Cetonia Brownii*.
 7. *Adelium caraboides*.
 8. *Helæus Brownii*.
 9. *Curculio mirabilis*.
 a. Ventral Cavity and Apparatus. bb, cc. Laminæ in ditto.
 10. *Distichocera maculicollis*.
 a. Labium. b. Antenna.
 11. *Leptura ceramboides*.
 12. *Chrysomela Curtisii*.
 13. *Achilus flammeus*.
 a. Front. b. Antenna.

* c d e are from *Bolboceras quadridens*.

